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An Assessment of the Effectiveness of Nudging by the Government

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Abstract

A developing economy faces many issues and challenges. Government tries to address these issues by framing appropriate policies and programmes. However, often the effectiveness of policies, programmes and schemes is limited on account of behavioural issues of the targeted public. Although the government makes the best attempts to achieve the objectives, the success of the policies depends on attitudinal changes in the public even as behavioural changes are hard to bring about. In this context, the science of Behavioural Economics helps in understanding the peculiarities of human behaviour. It uses psychological perspective of human behaviour in order to understand and analyze economic behaviour of individuals and institutions, so that the desired outcomes can be achieved from the decision making process. While there are many theories and principles under the branch of Behavioural Economics, one of the recent theories propounded by the Nobel Prize winners, Richard Thaler and Cass Sunstein, is the Nudge Theory.

The nudge theory is based on designing choices in such a manner that induces people's behaviour in the desired way without imposing restrictions on them and without much change in the economic incentives. Many countries have set up Behavioural Insight Teams (BIT), also known as Nudge Units, in government departments where continuous efforts are made to design policies and programmes in a way that capitalizes on the peculiarities of human behaviour rather than trying to change them. Application of nudge theory has had mixed success in countries that have adopted it, however, more and more countries, including India, are trying to incorporate nudging into their policy designs. Although, the government in India is yet to set up a nudge unit as proposed in the earlier central budget, many aspects of nudging are in use in several of its policies and programmes. In this context, the objective of the present study is to provide an understanding of the nudge theory and make an assessment of the notional effectiveness of nudging on the public by studying their perceptions and reactions to nudges applied by government. The study is based on primary data collection through questionnaire method, using convenience sampling method.

Keywords: Behavioural Economics, Nudge Theory, Public Policy

Introduction

Human beings are complex creatures of nature with dynamic behavioural issues. Decoding psychological aspects of human behaviour is a challenging task and behavioural scientists engage themselves in providing better understanding of the same. Economic decision making is one such area that has attracted great interest of economists, psychologists and academicians so that the decision making process is better explained and may be used fruitfully to predict the outcome of the choices. Recognizing the significance of behavioural peculiarities and human traits in influencing economic decision making led to the development of the science of Behavioural Economics. It is also known as Behavioural Science. It is a study of human psychology as it affects economic decision making. How a human being takes decisions, how they respond to government or business policies and what are the psychological processes through which human beings arrive at the decisions, etc., are the subject matter of Behavioural Economics. In other words, how human behavioural aspects play a role in economic decision making is explored and explained under Behavioural Economics. Various behavioural economic theories have been propounded under the branch of Behavioural Economics. These theories work around the behavioural issues of human beings.

While the theories put forth under behavioural economics provide an explanation for economic decision making, one of the new theories propounded i.e. the Nudge Theory by Nobel prize winners Richard Thaler and Cass Sunstein in 2008 suggests using these very behavioural peculiarities and irrationalities to get the desired outcomes from the decision making process. In their book "Nudge: improving decision about health, wealth and happiness", Thaler and Sunstein define nudge "as the term, in any aspect of the choice architect that alters people's behaviour predictably without forbidding any options or significantly changing their economic incentive". Nudge focuses on choice architecture which implies the designing of choices offered to people in such a way that results into their betterment. This tool helps government, policymakers, institutions, politicians, businesses, etc., to evoke the desired outcome. It alters human behaviour in such a way that it gives betterment for both human beings and to those who apply nudge. The essence of a nudge is the mix of liberty and guidance, known as libertarian paternalism which preserves liberty. It implies that people have the freedom of choice or liberty to choose but at the same time, these choices are presented in such a way by the government, policy makers or firms that it increases the chances of selecting options which brings betterment for society and more returns for businesses. It is termed as choice architecture which designs the choices for human beings.

With this premise, the present study seeks to provide an understanding of the application of the nudge theory and undertakes a preliminary inquiry into its effectiveness. The scope of the study is limited to examination of nudges used by the government.

Review of Literature

Research on the nudge theory is a field of recent development. Limited studies on the subject are found in the literature, much less in the Indian context. However, as the nudge theory is gaining popularity and is being increasingly applied by businesses and various government departments, academic interest in the field has also advanced. This has led to much research on the effectiveness of the nudge theory, especially in the developed countries. Studies on the effectiveness of nudging have found contradictory results depending on the nature of nudges used and the field and target of their applications.

This section reviews select literature on the subject. Iyengar and Lepper (2000) with the use of experimental evidence assert that there is a rationale for choice architecture because too many options to choose from overwhelms people and creates decision anxiety. Fewer options and those that are deliberately offered would nudge people for healthier lives.

The Report of the Centre d'analyse strategique (2010) opines that green nudges are a good method over and above the conventional methods to bring about sustainable changes in ecological behaviour. It points out positive effect of the green nudge field experiments conducted *in situ* in North America. The basic nature of the green nudges identified by the report is that they are operational, effective, adjustable and unrestrictive. The challenges of nudges are that they may have unintended side-effects and may lack scalability and durability. These issues can be borne in mind while designing the nudges.

Duflo, Kremer and Robinson (2011) have studied the effectiveness of nudging on farmers to induce optimum use of fertilizers in Kenya. The researchers used experiential method by dividing farmers in to groups based on their behavioural biases, and administering alternative offers of fertilizers wherein nudging was incorporated, in order to measure the effectiveness of the same. They find that calibrating the fertilizer subsidy to suit the behavioural peculiarities resulted into desired effect on the use of fertilizers. Oliver, Rayner and Lang (2011) discuss conflicting results of the effectiveness of nudging. Most cases discussed analyse the effectiveness of experiments conducted on nudging in some form or the other. They caution against nudge becoming connivance between state and corporations to deceive consumers.

O'Dowd (2011) has pointed out that nudging in itself is too weak to bring the desired effect in the absence of concrete measures. He refers to a report of a committee based in UK which contends that there is little evidence regarding how the knowledge of human behaviour can be profitably applied to influence behaviour.

Mont, Lehner and Heiskanen (2014) have attempted to gather evidence for the effects that nudging can exert on consumption behaviour in the use of energy at home, of food and in mobility in a way that is sustainable and environment friendly, and to find further potential applications of nudging to get the best effect in the context of environmental protection issues. For this purpose, using interview method they have analysed the working of nudging across five developed countries. They conclude that while the measurement of the gains from the use of nudges is difficult and that generalization of the effectiveness is not always possible, nudging is found to be a useful tool "for inducing changes in context-specific behaviour." They report that nudging is usually applied in terms of experiments, pilot studies and random control trials. The study also provides a SWOT analysis for the use of nudging by examining the existing academic knowledge on nudging and the practical experiences of application of nudging.

Reisch and Sunstein (2016) conducted an online survey through the interview method in six European countries to test whether the European countries support nudge or not. Multilevel Regression analyses were made based

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on the investigation of 15 intervention of nudge. The result showed strong majority support except for two countries, Hungary and Denmark, because of distrust in government and decline in trust in national politics.

Loewenstein et. al. (2017) have discussed the effectiveness of nudging in refraining people from harmful consumption by designing programmes to that effect. However, they also caution against hasty application of an appealing concept without sufficient empirical substantiation. They emphasise on the need for well-designed programmes and experimenting the same on pilot basis. They contend the effectiveness of nudging used in isolation, unless complemented by traditional policies and measures.

Veglianti (2017) points out the increasing emphasis laid on incorporating behavioural insights into public policy formulations as they take into account non-economic motivations for behaviour. She analyses and undertakes international comparisons of nudging applied across a wide range of countries, namely, UK, other EU countries, Australia, as well as the World Bank, which provides an understanding of the role and positioning of behavioural insight in public administration. While behavioural insights are being used in nearly 80 countries, there are reports of both success and failure. The basic challenge for nudging is the short term success even as the problems sought to be solved are huge and complicated.

Nayar and Kanaka (2017) have conducted experiment in India regarding water conservation through nudging in the form of effective posters that highlight the difference in access to water between rural and urban water. They report positive impact of the experiment. Sharma, Arora and Srivastava (2017) have explored different areas in which nudging can be applied in India, given its demographic and cultural characteristics. Tagat and Kapoor (2018) stress on how use of nudging in encouraging use of toilets can be more effective even as huge amounts of funds are spent on creating the physical infrastructure.

The brief review of literature shows that there are different viewpoints or opinions on incorporating nudging in public policy. No in-depth examination of the use of nudging by businesses or government, and their types, has been carried out in India. There are no studies in India that assess effectiveness of nudging used by businesses or government. In this context the proposed study is a pioneering attempt to examine the effectiveness of nudging by government.

Objectives and Research Methodology

Apropos the review of literature, the present paper has the following objectives:

- To provide an understanding of the concept of nudging
- To examine the impact of nudging in public policy

The notional effectiveness of nudging on the public has been assessed by examining their perceptions and reactions to nudges applied by government. The study is based on primary data collected through questionnaire method, using convenience sampling method. The government policies included in the study are the tax saving investment options and investment in term insurance scheme. The list of question covers four types of nudges i.e., incentive, strength of incentive, reminder and default option. The study analyzes the perception of respondents to the nudges applied by government to encourage saving and to improve coverage under term insurance. The perceptions have been measured on five point Likert scale.

The Concept of Nudging

Under the many branches of economics, one of the branches, Behavioural Economics, studies the behavioural aspects of human beings in decision making. It is a multidisciplinary field where disciplines like psychology, management, economics and neuroeconomics are integrated. Incorporation of behavioural aspects in economic decision making started with the rationality assumption which has been traditionally used in developing laws and theories of economics. Economists used this assumption to mean that people think logically and consistently in trying to optimize their objectives, either as a consumer, a producer or any other economic agent. But in real world this is not true. People tend to behave irrationally because factors like emotions, culture, social environment, etc., affect their decisions. To take cognizance of such irrationalities and peculiarities of human behaviour, economists and psychologists have propounded several theories based on different dimensions of human behaviour. The prominent among them are theories like bounded rationality, dual system theory, mental accounting, prospect theory, and so on, that have gained attention in economic policies and programmes and businesses with view to get better understanding of the processes that determine economic decision making. One common feature of these theories is that they identify peculiarities and traits of human beings as revealed by their behaviour but they do not discuss about how these peculiarities can be used to alter human behaviour and thereby their choice of the alternatives. It is in this context, that the nudge theory by Richard Thaler and

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Cass Sunstein offers a new approach to behavioural economics – that of using the aspects of human behaviour in a profitable way to achieve desirable outcomes that are beneficial or profitable for individuals, society, governments and businesses.

Richard Thaler and Cass Sunstein were awarded the Noble prize in Economics for the Nudge Theory. In their book "Nudge: improving decision about Health, Wealth and Happiness" they discuss the uses of nudging; how it would be helpful for governments in framing public policies; how nudge could change the behaviour in human beings. According to Cambridge English Dictionary nudge means to push someone with your elbow to attract the person's attention. Nudging – deliberate interventions that allow for freedom of choice but which also prompts people to make rational choices that can have beneficial effect on the individual as well as on the society at large, has caught the imagination of public policy formulation in many countries. Basically the mechanism of the nudge theory is that it provides a choice basket to people wherein the choices are designed in a manner so as to influence or divert people to choose in a way that is good for them. The nudges are designed in such a way so as to exploit the very irrationality and peculiarities of human behaviour. For instance, given that people are generally lethargic in explicitly opting for a more beneficial choice unless otherwise imposed, a nudge would make the beneficial choice the default setting along with the option to opt out of it if people wish to. Thus, exploiting the human behaviour for positive outcome is the crux of the application of nudge.

While businesses have been intuitively applying nudge on consumers for better profits, it is only recently that the same approach has got extended to application by governments and policymakers. Governments in countries like the US, UK, Germany, Denmark, Singapore and a host of others have developed Behavioural Insights Team also known as BIT where continuous efforts are made to develop tools to change human behaviour for the betterment of society and the people targeted. The nudge theory gained popularity among several countries, including India. The Economic Survey of India, 2019, has incorporated behavioural insights in improving the effectiveness of government initiatives like Beti Baachao Beti Padhao (Save the Girl Child, Educate the Girl Child) and Swacch Bharat Abhiyan (Clean India Mission) which marks the beginning of conscious efforts to apply nudge in public programmes. With more insight and involvement of behavioural science experts in designing the narratives of public policies and programmes it is expected that effectiveness of the measures would improve. However, it is a matter of research and empirical verification, for which the present study is a modest and preliminary attempt.

Assessment of the Effectiveness of Nudging

The study undertakes to assess the effectiveness of four types of nudges on people applied by the government in the context of savings and insurance. Primary data was collected through the questionnaire method where respondents were asked to scale their reactions to the nudge on a five point scale ranging from strongly disagree to strongly agree. The four types of nudges examined are:

i. Incentive:

To assess the effectiveness of tax exemption 'incentive' given by the government u/s 80C of the Income Tax Act, 1961 as nudge to encourage saving, questions were asked to check the perception of people towards such an incentive.

ii. Strength of Incentive:

To assess the effectiveness of the strength of the nudge incentive, respondents were asked to scale their responses on whether removal of tax exemption incentives would reduce their investments in such options.

iii. Reminder:

The third type of nudge tested for its effectiveness was the reminder nudges sent in the form of emails and sms reminding the recipients to invest in tax saving options.

iv. Default Options

The fourth nudge was framed as a default choice in terms of automatic deduction of a minimal amount of money from salary towards term insurance as a default option along with the option to opt out of such an arrangement. This nudge was assessed for its effectiveness in improving life insurance coverage.

Findings of the Study

The results of the responses to the four nudges are depicted in Fig. 1 to 4. Fig. 1 depicts that nudge in the form

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of a tax exemption incentive is highly effective in the perception of the public in encouraging savings. Combing the responses agree and strongly agree, it is found that 81 percent of the respondents believe that tax exemptions u/s 80C encourage people to save. On similar lines, Fig. 2 shows that 78 percent people feel that tax saving is the major reason for investing in such options. Compared to the first two nudges, the reminder nudge is not found to reveal a clear pattern. Only 41 percent of the respondents believe that reminder as a nudge induces them towards savings. Thus, nudge in the form of reminders is not found to be very effective. It is common knowledge that reminder messages from government departments or companies are more often ignored by people than otherwise. The nudge as default option (Fig.4) is found to be very effective with 76 percent of the respondents reacting positively towards it.

Fig.1 Frequency Distribution of Responses to Nudge Incentive

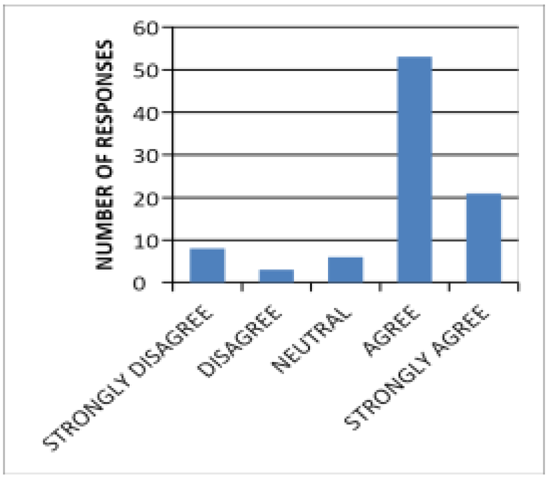


Fig. 2 Frequency Distribution of Responses to Strength of Nudge Incentive

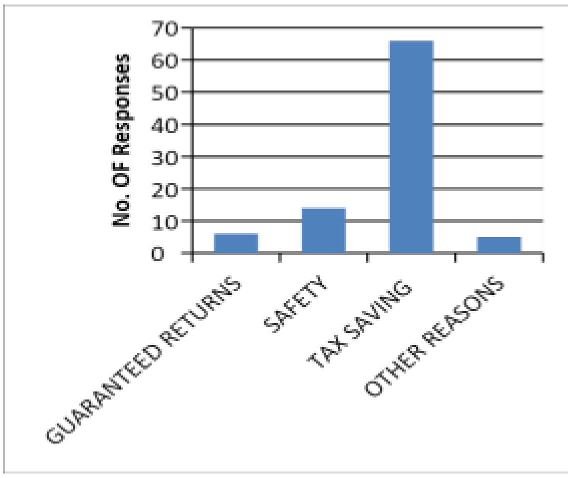


Fig. 3 Frequency Distribution of Responses to Reminder as a Nudge

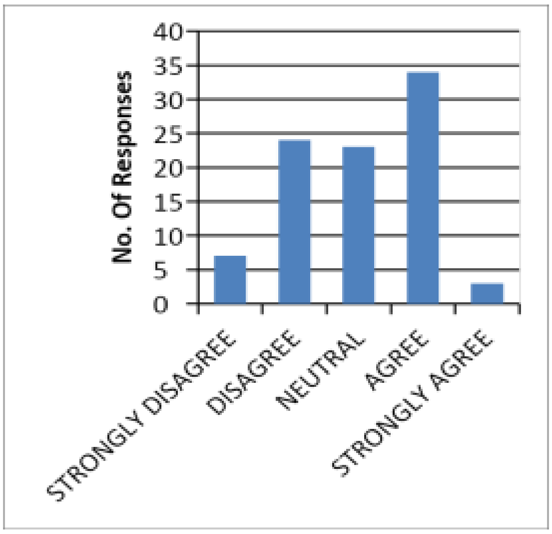
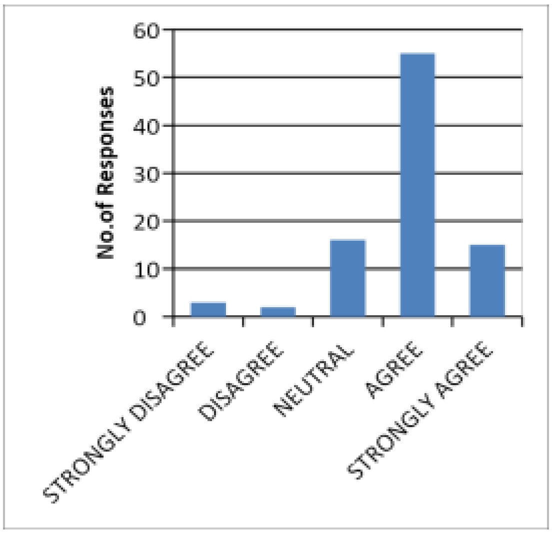


Fig. 4 Frequency Distribution of Responses to Default Option as a Nudge



Conclusion

The present study is a preliminary attempt to assess the effectiveness of nudges in government policies. The results give indications that some forms of nudge interventions used in public policies are effective in evoking the desired responses. Therefore, it is recommended that government should put in place a nudge unit that can suggest innovative nudge interventions along with traditional policy approaches to make them more effective.

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This study provides a useful base for further research and inquiry into the nudge theory and its application in the Indian economy.

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